## ABSTRACT

This invention provides analogues of phosphatidylinositol-phosphates modified at one or more selected inositol-hydroxyls and optionally carrying reporter or anchoring groups attached in the lipid or the inositol residues, and, the synthetic intermediates and methods for the preparation of these analogues. The analogues are useful as research reagents in biomedical studies related to structure, function and therapeuticals, including reference materials for analyzing the metabolic products in safety and efficacy studies of 2- and/or 3-hydroxyl modified inositols and phosphatidylinositols as drug candidates.